

REMARKS

Claims 30, 32-34, 36-44, 46-50, and 52-56 remain in this application. Claims 1-29, 31, 35, 45, 51, and 57-61 were previously canceled. Claims 30, 34, 37, and 48 have been amended.

Before addressing the merits of the rejections based on prior art, the Applicants provide the following brief summary of the claimed invention. The invention generally relates to a system and method for video content distribution and billing that utilizes a portable electronic storage device configured to uniquely interface, via a physical connector incompatible with industry standard devices, with an interactive kiosk and a set-top box. The use of connectors incompatible with industry standard devices protects the digital video content by preventing the digital storage device from mating with standard electronic devices. Further, unlike the prior art, the invention makes it possible to store both the video content and the customer's view / usage data on a portable storage device configured to manually interface with kiosks. This allows the customer to select and view desired video content and pay for use of the video content upon returning to the kiosk. In particular, the user may be billed for only those portions and durations of the video content that have been viewed and may be billed for the number of times video content has been viewed, as determined by the view / usage data written directly to the portable storage device. In particular, when a user views only a portion of a selected program, the billing will reflect only that fractional part of the viewed content. See specification at p. 2, line 5 ("After a half-hour, however, the renter decides that the movie is not worth watching.").

In one embodiment, illustrated in Fig. 1A, a customer 108 accesses a publicly accessible kiosk 102 and loads video content onto the portable video content storage device 104. See page 9, lines 3-14. The user 108 accesses the video content by manually attaching or inserting the storage device 104 into a compatibly configured set-top box 106 that plays the video content over a television set 110. The set-top box further comprises a physical connector that is incompatible with industry standards,

thereby assuring that the storage device is usable only with the set-top box and not with industry standard devices. The set-top box 106 accumulates and stores data relating to the user's use of or viewing of the video content directly on the storage device 104. See pages 9-10; Claims 30, 37, 48. The view / usage data is read upon a subsequent return to the kiosk 102 so that the user 108 can be appropriately charged. By storing view / usage data on the portable content storage device 104 and transferring the use data to the kiosk 102 upon a subsequent visit to the kiosk, it is possible to charge customers on a pay-per-view basis for only those portions of the content that are viewed without the need for a separate communication link with the customer such as a telephone line between a billing office and the customer's home. In particular, because usage data is recorded directly on the storage device, there is no need for the user to contact a service provider or financial institution to pay for and unlock video content before being able to view it. Similarly, in contrast to systems of the prior art, the user can access video content even when a network communication system is not functional. See page 9, lines 3-14; Claims 30, 32-34, 36.

The portable storage device 104 is capable of storing video data of at least MPEG-2 quality and is preferably sized to store several movie-length digital video files. See page 10, lines 14-19; Claim 30. As further illustrated in Fig. 3A, the portable storage device 312 protects against unauthorized access to the data stored thereon by employing a security module 308 to digitally encode data stored in the non-volatile memory 306 and a custom connector 310 that is incompatible with industry standard connectors. See page 3, lines 1-2; page 11, lines 20-29; page 12, lines 12-15; Claims 30, 33, 34, 37, 48. The security module within the portable storage device limits access to the memory by acting as a gateway that authenticates the identity of any device that attempts to communicate with the memory before allowing such communication to take place. See page 11, lines 22-25.

The portable video storage device 312 is configured to be accessed only by a compatible kiosk 102 and a compatible set-top box 106 (see Fig. 1A). It is important to

note that the controller 304 inside of storage device 312 controls the memory 306, and the memory 306 is compatible with the controller 304 but is incompatible with industry standard controllers (see Fig. 3A). This further limits access to the content stored on the storage device for security purposes. See page 11, lines 30-31; page 12, lines 1-6; Claims 30, 34, 37, 48.

The invention further comprises a kiosk 402, illustrated in Fig. 4, and preferably located in a public place such as a supermarket or shopping mall. The user manually inserts the portable storage device 104 into a slot 424 in the kiosk, causing it to mate with a connector 354 that is compatible with the portable storage device 104 but incompatible with industry standard connectors. See Claims 30, 34, 37. In one embodiment, the user interacts with the kiosk via a touch screen display interface 414, although additional user interfaces may be used. A processor 406 inside the kiosk controls a system bus 412 that communicates with a storage device controller 426 adapted to read and write video data and view / usage data to and from the portable storage device 104. A content mass storage module 422 stores video data that may be encrypted to prevent unauthorized access. The mass storage module 422 preferably stores dozens of movie-length video programs within the kiosk. Using the touch screen display 414, the user is able to transfer video data from the content mass storage module 422 to the portable storage device 104. Video view / usage data is transferred from the portable storage device 104 to the kiosk system memory 408, and system software 432 operates to calculate payment amounts based on the user's view / usage data. In particular, the user will be charged for only those portions and durations of the video content that have been viewed and for the number of times those portions have been viewed. The kiosk is adapted to include a bill and coin collector 418, and / or a credit card reader 416 to accept user payments. Security of the video content data and the view / usage data is ensured by a combination of data encryption and the use of an electrical connector 345 that is incompatible with industry standards. See pages 18-19; page 21, lines 11-15, 24-29; Claims 30, 33-34, 36-38, 48-50.

The invention further comprises a set-top box 106 adapted to interface with the portable storage device 104 to play video content on a television set 110 or similar device. See Fig. 1A. Like the kiosk, the set-top box includes a connector that is compatible with the portable storage device but incompatible with industry standard connectors. See Claim 48. Fig. 8 illustrates the process by which a user may view the video content using the set-top box and the portable storage device. At step 802, the user inserts the portable storage device into the set-top box, causing it to electrically and mechanically mate with a custom connector that is incompatible with industry standard connectors. Video content is then read from the storage device at steps 806, 812, and 814 and presented to the user via a television or similar device. Usage and viewing data is then written back to the portable storage device at step 816, and the storage device is released from the set top box at step 818. See page 26, lines 18-25; page 28, lines 23-31; page 29, lines 1-28; Claims 30, 34, 48-49, 53.

Each of the foregoing elements of the invention is advantageous for securely distributing video content, for allowing a user to be billed based on actual use without the need for a separate data connection between the user's home and the video distributor, and for displaying the video content on a user's television or similar device at a time of the user's choosing. As further discussed below, the above-described elements are not suggested or disclosed by the prior art.

Rejections Based on Prior Art

The Examiner rejected Claims 30, 32-34, 36-44, 46-50, and 52-56 under 35 U.S.C. § 103(a) as unpatentable over Lewis in view of Amron and further in view of Xie. The Examiner further applies Flannery to dependent claims 36 and 38. The Applicants respectfully traverse these rejections.

As a preliminary matter, it is noted that in the prior office action, the Examiner combined Lewis with Flannery and Ginter. In response to the Applicants' arguments that Flannery was not analogous prior art, the Examiner has now added Amron and Xie

but continues to rely on Flannery to reject dependent claims 36 and 38. However, as discussed previously, Flannery is inappropriate in that it is not analogous prior art. In determining obviousness under § 103, the prior art must be evaluated to determine (1) whether the art is from the same field of endeavor, or (2) if not within the inventor's field of endeavor, is still pertinent to the particular problem the inventor is trying to solve. *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). A determination that prior art is analogous "begins the inquiry into whether a skilled artisan would have been motivated to combine references by defining the prior art relevant for the obviousness determination, and that it is meant to defend against hindsight." *In re Kahn*, 441 F.3d 977, 987 (Fed. Cir. 2006). Indeed, if the reference is "directed to a different purpose, the inventor would accordingly have had less motivation to consider it." *Clay*, 966 F.2d at 659-660.

Flannery is directed to a removable floppy disk drive (FDD) that can be interfaced with a laptop computer. In particular, Flannery is directed at providing a more compact package for the FDD such that a user can easily carry it with him when he desires to have both floppy disk and compact disk functionality with a laptop computer. *Flannery*, 3:5-23.

By contrast, the present application is directed to a portable digital storage device for transporting video content in a secure manner from a public kiosk to a set-top box connected to a television in the user's home. A particular problem the present invention seeks to address is preventing unauthorized access to the storage device. Accordingly, it is equipped with a non-industry-standard memory controller, a security module, and non-industry standard connectors to prevent the stored content from being accessed by a standard device. The system of Flannery has nothing to do with the secure storage and transport of video data. In particular, an FDD is not a storage device. It is merely an interface for connecting to a particular storage device, namely, an industry-standard floppy disk. Flannery never addresses the subject of data security or even data storage, and it is thus not directed to the same field of endeavor as the present application nor is it directed to solving a similar problem. Flannery is thus not

analogous prior art, and the Examiner's reliance on it to reject Claims 36 and 38 is inappropriate for at least this reason.

Rejection of independent Claims 30, 34, 37, and 48

The proposed combination fails to disclose every limitation of the independent claims. For example, the Examiner relies on Lewis as disclosing "a portable video content storage device . . . [having] a security module that connects with and limits access to the memory." Office Action, p. 4. As evidence of the claimed security module, the Examiner notes that Lewis discloses "that access to the content downloaded to the portable recorder / player 19 is limited to users that have satisfied the associated fee, and have the authorization key downloaded." *Id.* However, Lewis describes the portable recorder / player as a "DVD-RAM, DVD recordable / re-writable (DVD-R), CD read/write CD-RW, minidisc, or other digitally recordable drive" that may contain data stored in either "open or scrambled format" depending on the terms between the user and provider. *Lewis* ¶ 160. In other words, the data is not protected by a security module that is part of the portable storage unit but is rather scrambled or encrypted before being written to the portable storage media. In particular, Lewis includes no disclosure of the portable device's limiting "access to the memory by authenticating the identity of any device attempting to communicate with the memory," as required by Claims 30, 34, and 37, as amended.

In addition, the Examiner admits that Lewis fails to disclose billing a user according to a scheme that calculates "a usage fee based on at least the number of times and the portions of the securely stored video content that are accessed." The Applicants have amended Claims 30, 34, 37, and 48 to more clearly point out the claimed limitation in this regard. In particular, Claim 30 recites that the stored content use data "comprises at least a number of times the securely stored video content is accessed and which portions and the durations of such portions of the securely stored video content that are accessed" and that the kiosk calculates usage fees based on

both “the number of times and the durations of the portions of the securely stored video content that are accessed.” Claims 34 and 48 include similar language.

The Examiner proposes the addition of Xie to make up for this deficiency. Xie describes a method of encoding DVDs with a particular individualized serial number or code and then providing a DVD player that can read this code and communicate with a central billing center (over a modem, for example) in order to charge a customer each time a particular DVD is played. Xie 2: 22-34. While such a scheme might allow the billing center to keep track of the number of times a certain DVD is played, the Examiner does not explain how it might accumulate data regarding which portions and the durations of such portions that are viewed. The Examiner points out that the device of Xie may store more than one title per DVD such that watching one title might constitute a portion of the data on the storage device. However, the present application requires the ability to store content use data based on “the durations of such portions of video content” that are accessed by the user, and Xie does not disclose or suggest how this might be accomplished.

Furthermore, the serializing of the DVDs disclosed in Xie happens at the point of distribution to create a code that will act as a billing trigger each time the DVD is played. By contrast, the present invention requires that the content use data be written to the portable content storage device itself such that the kiosk may “read the accumulated content use data from the storage device,” as recited by Claim 30, and calculate the appropriate fee based on the stored usage data. The system disclosed by Xie is not capable of writing content use data back to the storage device for later retrieval by a kiosk. Rather, the DVD player simply sends a signal to the billing center each time the DVD is played.

Further, as amended, Claim 30 requires that “the interactive kiosk is further configured to erase the accumulated content use data from the storage device that specifies content use for which payment has already been made.” See Specification, p. 21, line 30 - p. 22, line 4. Xie provides no mechanism that would allow such content

use data to be erased. Indeed, it provides no mechanism for content use data to be stored to the device at all.

The Examiner's contention that it would have been obvious to modify Lewis to bill customers per usage as taught in Xie is unavailing because nowhere does the combination teach or suggest that the portable storage device is "configured to accumulate content use data and store the accumulated content use data directly onto the storage device," as required by Claim 30, and similarly by Claims 34, 37, and 48. The Examiner suggests that the VPR/DMS of Lewis meets these limitations by providing "electronic monitoring and logging of all transactions." See Office Action, page 5. However, the single paragraph of Lewis that refers to such monitoring and logging is directed toward licensing and distribution, noting that such mechanisms "might be executed by random sampling, periodical monitoring or retrieval of statistical data about distribution . . ." Lewis, ¶ 260. However, keeping track of whether a licensed product has been distributed is not the same thing as monitoring how much of and how often a user has viewed video content and generating fee bills based on how much of and how often the content is viewed. Lewis does not discuss use-based billing as recited in Claim 30, and it further makes no mention of storing content use data "directly onto the storage device" as the independent claims require. Xie does not make up for this deficiency as discussed above. Amron similarly fails to make up for this deficiency as it is added only for its disclosure of non-standard physical interfaces.

The proposed combination of references thus fails to disclose or suggest multiple limitations of independent Claims 30, 34, 37, and 48, as discussed above and therefore also fails to render obvious the claims that depend therefrom. In view of the foregoing, the Applicants respectfully submit that Claims 30, 32-34, 36-44, 46-50, and 52-56 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited.

To the extent it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel


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and conduct a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a three-month extension of time, extending to March 2, 2010, the period for response to the Office Action dated September 2, 2009. The Commissioner is authorized to charge \$555 for the three-month extension of time pursuant to 37 CFR §1.17(a)(3) and any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,

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